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ECOLOGY CONSULTANCY SERVICES, MALDON, ESSEX



Preliminary Ecological Appraisal Incorporating Bat Survey Inspection

Church Farm

Church Hill

Hempstead

Essex

CB10 2PA

Prepared for:

T.M Sills

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1. Survey Finding and Recommendations Summary

In summary, the proposed development area comprises existing buildings and associated hard standing situated in the context of a farmyard. As such, the site is subject to disturbance as would be reasonably expected in such a land use context.

The statutory designation search undertaken as part of the desk study identified that the site is not situated directly within nor bounding any statutory or non-statutory designated locations.

No trees or buildings with bat roosting potential are situated on site, nor would be lost to the proposal. At most, buildings on site are considered to offer a negligible level of roosting potential. Further surveys are neither necessary nor appropriate.

Although no evidence of bats was found, it is probable that bats from nearby roosts will forage in the gardens of the site, in those of adjacent properties given boundary tree lines and presence of offsite ponds. Three species have been recorded roosting in St Andrew's church, with two further species found hibernating. The church is located around 150m to the west of the survey site. Given that all trees/tree lines would be retained, and where appropriate enhanced as part of a proposal, this foraging behaviour would be expected to continue after the completion of the building work and therefore it is considered that the proposal for this site will not have a detrimental effect on the local bat population, or on protected species. However, as specific recommendations, to manage potential impacts of the construction and completed phases, use of a bat considerate lighting scheme is recommended, along with the use of integral bat boxes. The full scope of ecological enhancements recommended are provided in section 5.2.

It is not considered reasonably likely that reptile species would be adversely affected by the development proposals given nature of the proposal relating to existing buildings. Whilst no further surveys are necessary and risk to the species is considered low, a precautionary Non-Licensed Method Statement is advised in respect of great crested newt. Such a document should be requested by way of an appropriately worded condition upon consent, and should be a specific pre-commencement requirement.

No active or inactive badger setts were found, with no evidence of badger activity identified. No surveys have been advised. However, general appropriate precautionary measures for the construction phases have been advised in section 5.2.

Appropriate recommendations in respect of due diligence relating to nesting birds and priority species and other ecological enhancements have been made in section 5.2 of the report.

It is considered and concluded that the proposal can proceed without adverse impacts upon legally protected/priority species and habitats provided the specific mitigatory guidance and enhancement recommendations identified within section

5.2 are fully adhered to. Where necessary, appropriately worded conditions should be placed upon any consent granted in order to ensure appropriate measures are followed.

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2. Introduction

2.1. Phase 1 Brief

T4 Ecology Ltd was commissioned by T.M. Sills to undertake an ecological assessment at Church Farm, Church Hill, Hempstead, Essex.

This report contains the findings of a Preliminary Ecological Appraisal-PEA. The purpose of a PEA is to identify the potential for presence of protected species on a site, in line with UK law and the requirements of The National Planning Policy Framework (NPPF)(2021). The brief of the ecological survey was to assess the habitats found on site and identify the potential for presence on site of protected species.

The site-based element is supported by a desktop study undertaken to identify presence of Statutory/National/Local designations or protected species within the vicinity (up to a 5KM radius) of the site. The final part of the project brief was to identify and make recommendations as appropriate for any further surveys required to determine presence/absence of protected species on site if the survey determined that presence of a protected species on site was considered to be reasonably likely.

2.2. Bat Survey Brief

In addition, this report also contains the results of a Preliminary Roost Assessment (PRA) undertaken at the same time as the PEA, comprising an internal/external inspection of the existing building/s. Bats are a strictly protected species under European Legislation. In this regard, given presence of buildings where demolition/alteration works are proposed, the inspection was undertaken in order to meet the specific requirements of the legislation to inform design, mitigation and if appropriate, European Protected Species License Applications.

2.3. Development Proposals & Planning Context

Proposals are for the conversion of existing farm buildings to residential use. An assessment of any potential impacts resultant from the proposal has been made, and recommend further works/appropriate mitigation as appropriate identified in section 5.2 of this report.

2.4. Scope of Survey

The purpose of this report is to provide an independent opinion of the likely presence of protected species on a site to inform the client of their obligations, and to assist the Local Planning Authority (LPA) in their determination of a planning application.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. This PEA does not constitute a full botanical survey or a Phase 2 preconstruction survey for Japanese Knotweed. In this regard, this survey provides a preliminary view of the likelihood of protected species occurring on site, based on the suitability of the habitat and any direct evidence on site. Additional surveys may be required if it is considered reasonably likely a protected species may be present.

The survey presents a snapshot in time, and therefore makes an assessment purely of what was seen at the time the survey was undertaken. The PEA does not therefore make any retrospective analyses.

This report has a maximum validity of 18 months from the date which the survey was undertaken. Beyond 18 months, it is unsuitable for use in planning and should be rejected by the Local Planning Authority.

3. Methodology

3.1. Survey

Habitats on site were recorded in accordance with the general principles and methods provided in the Handbook for Phase 1 Habitat Survey, JNCC 1993. The survey methodology involves undertaking a site visit to gain an understanding of the site ecology and surrounding characteristics. During the site visit the recording and mapping of habitat types and ecological features present on site is undertaken, including the identification of the main species present. The potential for presence of protected species is assessed as part of the overall methodology, and further advice/surveys recommended as considered appropriate based on the evidence obtained.

The survey works were undertaken in accordance with Guidelines for Preliminary Ecological Appraisal produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) in December 2017.

Methods are also in accordance to the general principles contained within British Standards Institute (BSI) BS42020 – Biodiversity-Code of Practice for Planning & Development.

A habitat plan is included as Annex 3. Photographs are included within Annex 2.

3.1.1. Survey Timings and Conditions

The survey was undertaken by Consultant Ecologist Peter Harris BSc (hons) MCIEEM FRGS on the 13th October 2021. The bat inspection was undertaken by John Dobson Bsc FBNA also on the 13th October 2021. Weather conditions were clear and dry with an ambient air temperature of 13°C.

Peter Harris is a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM) and a Fellow of The Royal Geographical Society (FRGS). The surveyor is licenced by Natural England for surveying great crested newts. The surveyor is an ecologist with over 14 years of experience, and has been involved in a wide range of projects from single dwelling developments to large strategic urban renewal schemes subject to full Environmental Impact Assessment (EIA).

As an ecologist for over 14 years, Peter has obtained significant experience in respect of a wide range of protected and priority species. Species worked with include reptiles (surveys/mitigation), great crested newt (surveys/mitigation), badger (surveys/mitigation/licencing), dormouse (surveys) and bat, encompassing a wide range of survey and monitoring techniques. These include internal/external inspections/Preliminary Roost Assessment (PRA), in addition to involvement with successful bat mitigation license applications working in conjunction with specialist organisations.

John Dobson is a Bat Ecologist and Natural England Licensed Bat Worker & Trainer, Licence reference No. 2015-15258-CLS-CLS. John has been elected a Fellow of the British Naturalists' Association (FBNA) and received the David Bellamy Award for natural history in May 2015. John is a highly experienced bat and mammal ecologist, is the Essex County Mammal Recorder and author of '*The Mammals of Essex*'.

3.2. Desktop Study & Records Search

To gain an understanding of any designations on/around the site in addition to the historical presence of protected species, desktop data has been obtained from the following sources:

3.2.1. Historical Protected Species Data

Records were requested from the Essex Field Club (EFC) Essex Recorders Partnership data search service. The information supplied by EFC is compiled using county records held by the County Recorders of the Essex Field Club, Butterfly Conservation, Essex Amphibian & Reptile Group, Essex Bat Group and provide information upon the records that were available at the time the search was undertaken. Therefore, a protected species records data search was undertaken for records of protected species for a minimum of 1km and a maximum of a 2km radius of the site grid reference, in addition to any other pertinent information relevant to the site.

Records were also provided by Essex Mammal Recorder, John Dobson.

In addition, the Natural England Open Data Portal was accessed for information in respect of protected amphibian species and Great Crested Newt District Licencing Zones.

Use of data is in accordance with CIEEM Guidelines for Accessing & Using Biodiversity Data, March 2016.

3.2.2. Designations

A desktop study was undertaken through MAGIC (Multi-Agency Geographic Information System for Countryside). The search looked to identify the presence of statutory designated sites within a 5km radius (e.g. Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

3.2.3 Additional Information

Freely available on-line mapping information and Ordnance Survey Maps were consulted as part of the background assessment.

3.3. Bat Survey Methodology

The PRA was undertaken employing methods based on the guidance described in the Bat Workers' Manual, English Nature's Bat Mitigation Guidelines and updated Bat Conservation Trust Bat Surveys Guidelines for Professional Ecologists (2016).

However, the first page of all three editions includes the following: *The guidelines should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. Where examples are used in the guidelines, they are descriptive rather than prescriptive.*

Surveyors are expected to make judgements in respect of methodology appropriate to the survey conditions/evidence noted, and make conclusions based upon experience.

3.3.1 External/Internal Inspection

The first section of the survey involved an external inspection of the external surfaces of the buildings to identify any features that could be potentially be utilised by bats for roosting purposes. Such features may include small gaps and openings in brick work/roof structure, broken or missing tiles, or gaps in the soffits. During the external inspection, the buildings were also examined for key indicators of bat activity, such as droppings/staining in areas such as window ledges, walls other suitable external structural features.

The second section of the survey involved an inspection of internal areas of the buildings where safe access was possible. The purpose of the inspections was to identify whether there is any evidence of bat activity/roosting. Again, indicators of evidence such as droppings, fur deposits, scratching and staining were searched for, in addition to features such as insect remains that may have been brought into a building by a bat. In addition, issues such as structural integrity of the buildings, and whether the building has structural features such as enclosed/hidden roof spaces are taken into account.

An Xtend & Climb Pro Ladder and a ProVision 300 endoscope were available to inspect crevices in brickwork and around beams.

An assessment of any vegetation potentially affected by the development proposals was also undertaken where appropriate.

3.3.2 Habitat Suitability Index Assessment

As part of the assessment for suitability of the site to support GCN, a Habitat Suitability Index (HSI) assessment (Oldham, 2000) was undertaken.

The HSI follows a scoring system whereby ponds are assessed against ten predefined criteria or factors (location, pond area, pond drying frequency, water quality, shade influence, presence of water fowl and fish, number of ponds in the area, amount of

surrounding terrestrial habitat and percentage cover of macrophytes) that are considered to be influential for Great Crested Newts. For each of the ten factors a score between 0.1 and 1 is awarded, from these individual scores an overall Habitat Suitability Index is calculated. A pond that achieves a high habitat suitability index score is considered more likely to be associated with the presence of Great Crested Newts. The following scale is applied:

- <0.5 Poor
- 0.5—0.59 Below Average
- 0.6—0.69 Average
- 0.7—0.79 Good
- >0.8 Excellent

The HSI index is not a substitute for presence/absence surveys, and the scoring does not categorically confirm/rule out presence of a species. However, HSI is a useful tool in making an assessment of a habitat quality, and provides an appropriate indication as to whether presence/absence is more or less likely, and any action required based on findings.

4. Results

4.1. Desk study Results.

Site Details

- The site is located at Central Grid Reference: TL 63703 37940
- Postcode: CB10 2PA

4.1.1. Magic-Statutory Designations

The search identified that the site is not directly located within nor bounding a statutory designation. The following statutory designated locations are situated within a 5km radius of the site:

- West Wood Little Sampford Site of Special Scientific Interest (SSSI). Approx. 4.8km south at closest point.
- Ashdon Meadows SSSI – Approx. 5.0km north west at closest point.

Impact Assessment

The site is not situated directly within nor bounding a statutory designated location. Given relative distance and nature of the proposal relating to existing buildings within the context of a farmyard, it is not considered reasonably likely that the proposal would have any adverse impact upon statutory designated locations.

4.1.2. Local Wildlife Sites-Non-Statutory Designations

Local Wildlife Sites (LWS) are used in the planning system to protect areas that have substantive nature conservation value at a local level.

The site is neither situated within, nor directly bounding any LWS locations. There are no LWS locations within a 500m radius of the site. The nearest such location comprises Wincelow Pasture situated approx. 0.6km to the north west of the site.

Impact Assessment

The site is not situated directly within nor bounding a non-statutory designated location. Given relative distance and nature of the proposal relating to existing buildings within the context of a farmyard, it is not considered reasonably likely that the proposal would have any adverse impact upon statutory designated locations.

4.1.3. Biological Records

The records have been analysed as part of the desk research and considered as part of the conclusions and subsequent recommendations of this report. A summary of records is provided below, with the majority of records available to 1km grid square resolution:

Terrestrial Mammal

Since the early 1980s, the Essex Bat Group has monitored the status and distribution of bats in this area. Records occurring within a 2km radius of the site are as follows:

31 Jan 2015	Pipistrelle roost in church
31 Jan 2015	Natterer's Bat hibernating in church
31 Jan 2015	Daubenton's Bat hibernating in church
31 Jan 2015	Brown Long-eared Bat roost in church
24 Jul 2016	Brown Long-eared Bat roost in church
24 Jul 2016	Common Pipistrelle roost in church
24 Jul 2016	Serotine roost in church
06 Jul 2013	Common Pipistrelle recorded foraging
12 Jul 2003	Pipistrelle roost in house
10 Jun 2006	Common Pipistrelle recorded foraging
25 Jun 2005	Common Pipistrelle recorded foraging
15 Aug 2001	Daubenton's Bat recorded foraging
15 Aug 2001	Pipistrelle roost in building
30 Nov 1999	Brown Long-eared Bat roost in building
15 Apr 2008	Pipistrelle droppings in outbuilding

Bats

Name	No.	Closest Distance	Year
Common Pip	5	0.5km	2006 - 2015
Pip species	5	0.5km	2003 - 2015
B. Long eared	7	0.5km	2015 - 2016
Natterer's	5	0.5km	2015
Noctule	1	1.3km	1996

Daubenton's	3	0.5km	2015
Serotine	3	0.5km	2009-2016

Badger

The search identified 1 record dated 1996 within the search radius.

Western Hedgehog

1 record was identified dating from 1994, 0,9km from site.

Amphibian/Reptile

GCN

No records of GCN or other amphibian species were available within the search radius.

Reptile

A single record for grass snake was available dating from 2020, 0.8km from site.

Birds

Species noted include: sparrowhawk, common buzzard, little egret, kestrel, swallow, pied wagtail and tawny owl.

4.2.1 Site & Surroundings Description & Habitats

Church Farm is situated on the eastern side of Hempstead village. The site and associated buildings comprises the farmyard, which is broadly rectangular in shape, and situated in a north west to south east delineation and approximately 0.7ha in size.

To the north east and north west, the site is bounded by arable, agricultural land. A residential dwelling and garden is situated to the south east, with a dwelling, garden, verge and pond bounding the farm yard to the south west, adjacent to Church Road.

The site is entered from the southern corner of the site linking to Church Road, leading into the farmyard. The yard comprises 9 agricultural buildings which are described and considered in section 4.3.1.

The main body of the farmyard comprises hardstanding (concrete & compacted gravel), and it is evidently an active, operational farmyard location. Patches of scattered ruderal and ephemeral weeds have colonised in gaps in the hardstanding and around buildings.

There are no trees or hedgerows situated within the main body of the site, with all principal vegetation situated on or beyond site boundaries.

To the west of the farmyard is an area of mown, managed lawn situated adjacent to a pond. A tree line comprising English Elm, hazel, ash, willow, lime and cypress is situated along the south western boundary alongside the pond. The north western boundary of the farmyard is defined by a young managed hedgerow/tree line comprising sycamore, field maple and cherry.

In summary, the proposed development area comprises existing buildings and associated hard standing situated in the context of a farmyard. As such, the site is subject to disturbance as would be reasonably expected in such a land use context.

4.2. Potential for Protected Species Impact with Proposals

The site was assessed for the potential presence of protected species that may have a material impact upon the development proposals.

The ecological value of the site in respect of the potential presence of and impact upon protected species is considered further in the following sections:

4.2.1. Bats & Internal/External Inspections

All bat species are strictly protected under the Wildlife and Countryside Act 1981 and the Conservation Regulations (Habitat Regulations).

The locations of buildings described are illustrated on the plan contained within Annex 3, with photographs in Annex 2.

Buildings 1 and 2

This is a large, meta-framed grain store with block and metal sheet walls and a corrugated asbestos roof. The building is aligned NW-SE and has a workshop with nine windows and three transparent roof panels on the north-eastern side. There were no features that might offer potential roosting places for bats.

Building 3

This is a large, metal-framed building with a corrugated tin roof and walls above a block plinth. The interior receives daylight and draughts and has no features that might be occupied by bats.

Building 4

This is a metal-framed, open-sided building with a corrugated asbestos roof. The interior was exposed to wind and rain and had no potential as a roosting place for bats.

Building 5

Located in the centre of the site, this is a single-storey, metal-framed building with a corrugated tin roof and weather-boarded walls. The building is aligned NW-SE and has solar panels along the south-western slope of the roof. The interior receives daylight illumination via eight windows and lacks features in the walls and roof that might be occupied by bats.

Building 6

This building has metal sheet walls and a corrugated tin roof. The roof has solar panels on the south-eastern slope. There was no access to the interior, but the type of secure building indicated that it would be unsuitable as a roosting place for bats.

Building 7

This is an open shelter with a corrugated tin roof and solar panels on the south-eastern slope. The interior received daylight illumination via the open, north-western side and there were no cavities in the machine cut beams that might be occupied by bats.

Building 8

This is a timber-framed barn with a slate and felted roof and weather-boarded walls. The roof is aligned NE-SW and has a midstrey on the south-eastern side and an open storage area with a sloping tin roof lined with boards to the north-west.

Building 9

On the south-eastern boundary of the site, this is an open-sided barn with a double-pitched tin roof of semi-circular cross section supported by a metal frame. At the north-eastern end, the building is open to a timber-framed, open-sided extension to Building 8. The interior of all sections was exposed to wind, conditions that are usually

unsuitable for roosting by bats. No evidence of their presence was found in the building.

Building 10

Building 10 is a small, single storey brick/block storage building with render walls and corrugated asbestos apex roof. It had no potential as a roosting place with no evidence that would suggest otherwise identified.

Vegetation/Foraging/Commuting

There is no vegetation affected by the project that has crevices, loose bark or woodpecker holes that might be colonised by bats. No trees with roosting potential are situated on site.

Although no evidence of bats was found, it is probable that bats from nearby roosts will forage in the gardens of the site, in those of adjacent properties given boundary tree lines and presence of offsite ponds. Three species have been recorded roosting in St Andrew's church, with two further species found hibernating. The church is located around 150m to the west of the survey site.

Impact Assessment

Bats are inquisitive, highly mobile animals, which constantly investigate their surroundings, evaluating good feeding areas and potential roosting opportunities. Where suitable habitat such as woodland, woodland edge or sheltered pasture occurs, bats will travel up to several kilometres to take advantage of this resource. To reach favoured sites, small bats will follow linear landscape features such as hedgerows, streams and lanes etc. The absence of such features can make an otherwise suitable site inaccessible to bats. In addition, new roosts will become established in such areas - examples being the rapid colonisation of artificial roost boxes placed in conifer forests or the occupation of new houses by nursery colonies of pipistrelle bats within a year or two of their completion.

No trees or buildings with roosting potential are situated on site, nor would be lost to the proposal. At most, buildings on site are considered to offer a negligible level of roosting potential. Further surveys are neither necessary nor appropriate.

Although no evidence of bats was found, it is probable that bats from nearby roosts will forage in the gardens of the site, in those of adjacent properties given boundary tree lines and presence of offsite ponds. Three species have been recorded roosting in St Andrew's church, with two further species found hibernating. The church is located around 150m to the west of the survey site. Given that all trees/tree lines would be retained, and where appropriate enhanced as part of a proposal, this foraging behaviour would be expected to continue after the completion of the building work and therefore it is considered that the proposal for this site will not have a detrimental effect on the local bat population, or on protected species. However, as specific recommendations, to manage potential impacts of the construction and completed phases, use of a bat considerate lighting scheme is recommended, along

with the use of integral bat boxes. The full scope of ecological enhancements recommended are provided in section 5.2.

4.2.2. Badgers

Badgers and active setts are afforded protection under the Protection of Badgers Act 1992.

No evidence of badger activity including active or inactive setts, latrines or footprints was identified in the proposed development area, or wider freely accessible areas bounding site within a 30m radius. However, a transitory presence is considered a reasonable likelihood.

Impact Assessment

No active or inactive setts were found, with no evidence of badger activity identified in any location.

No further surveys are considered necessary or appropriate. However, general best practice precautions in respect of the demolition and construction phases have been provided in section 5.2 given the possibility of transitory presence of the species/transitory mammal species.

4.2.3. Nesting Birds

Nesting birds and their eggs are protected under the Wildlife & Countryside Act 1981.

Generally, with the exception of building 8, the buildings present relatively limited nesting opportunities. However, within building 8, recent evidence of barn owl activity was identified. The evidence comprised fresh pellets (approx. 10 fresh) and droppings splatter within the building interior. No evidence suggesting roosting was noted, but it is evident that the building is in use for perching.

In respect of trees/hedgerows, these features would be retained and therefore, vegetation losses are likely to be negligible given type of development relating to existing buildings in the context of a farm yard

As general guidance prior to future works/maintenance, the bird breeding season is from March to September. If works to buildings/vegetation is proposed during the season, a check should be made for nests prior to works commencing. If nests are present, they should be left intact and undisturbed until the young have fledged.

Impact Assessment

With specific regards to barn owl, a priority and at-risk species, from a general perspective, it is advised that the use of the building by the species is maintained as part of the development. Essentially, the strategy should maintain continuity of occupation by creating alternative provision at least 30 days any works begin, maintain the legality of the development by carrying out development works outside of the breeding season given that barn owls are protected by law against disturbance whilst nesting. Finally, the strategy should establish permanence by creating a

permanent accessible potential roost site space within (i.e. inside) the finished development to replace, and with the ultimate aim of enhancing the site.

In respect of nesting birds, provided works are undertaken during appropriate seasonality/due diligence as recommended above, the proposals would not have any impact upon nesting birds.

New opportunities for nesting birds could be provided through provision of nesting boxes on buildings/nearby trees where appropriate, in addition to new planting undertaken as part of the proposal to compensate for any planned losses. Further guidance is provided in section 5.2.

4.2.4. Reptiles

Reptiles are afforded protection under the Wildlife & Countryside Act 1981, with smooth snake and sand lizard afforded full protection under the same act and the Conservation Regulations (Habitat Regulations).

As described in section 4.1, proposals relate to existing buildings situated within the context of a farmyard. It is not anticipated that potentially suitable habitat would be lost to or affected by the proposal.

Impact Assessment

As identified above, the proposed development area is not considered to provide potentially suitable reptile habitat. Based upon the evidence above, it is not considered reasonably likely that reptile species are present on site given lack of suitable habitat on site. Therefore, the risk of potential impact of the proposals upon the conservation status of reptile is negligible. The risk of potential impact of the proposals upon individual reptiles is also considered to be negligible. No further surveys are necessary in respect of reptile species.

4.3.5. Great Crested Newt

Great crested newt is strictly protected under the Wildlife and Countryside Act 1981 and the Conservation Regulations (Habitat Regulations). The site is situated within a Natural England District Level Licencing Great Crested Newt Amber Zone.

No ponds are situated within the proposed development area nor would be lost to the proposal. As identified in section 4.1, the proposal relates to existing buildings within the context of a farmyard, and the site itself presents as poor potential habitat.

As identified in section 4.1, a pond (Pond 1) is located approximately 20m offsite to the south east of building 9. A further pond (Pond 2) is located west of the site adjacent to a mown verge and Church Road. Whilst the ponds are unaffected, given relative proximity to the farm yard, the ponds were subject to assessment under HSI:

Table 1

Pond No.	Reference	Location	Area (m2)	Pond Permanence	Water Quality	Shade (%)	Waterfowl	Fish	Pond Density	Terrestrial				Final HSI Score	Prediction (Likelihood of GCN)
										Habitat Quality	Macrophyte Cover (%)	HSI Sum	HSI		
2	Pond 2	1	1	0.5	0.67	1	0.67	0.33	0.65	0.67	0.5	0.02	0.66	Average	
1	Pond 1	1	0.4	0.5	0.67	1	0.67	0.67	0.65	0.67	0.3	0.01	0.62	Average	

Under assessment, the pond is considered to present 'Average' potential habitat quality.

Whilst it is acknowledged that small numbers of GCN have been known to range significant distances (1km) to colonise new ponds, sometimes over a number of years if connective habitat is suitable, research undertaken by English Nature¹ (now Natural England) indicates that it is most common to encounter them within 50m of a breeding pond, with few moving further than 100m unless significant linear features or suitable terrestrial habitat is involved, when great crested newts can be encountered at distances of between 150m – 200m. At distances greater than 200-250m great crested newts are hardly ever encountered. This valuation of habitats according to distance from great crested newt breeding ponds has also been adopted as part of Natural England's European Protected Species application form, with specific reference to the guidance provided by Natural England in WMLa14-2.

It is acknowledged that there is no way of identifying whether there are other small ponds that may be hidden within any nearby dwellings/field margins and not shown on maps. None were immediately visible from site/analysis of mapping data. Identification of such ponds located on private property and not shown on maps cannot be reasonably expected as part of this survey/desk study.

Impact Assessment

Whilst the presence of GCN cannot be completely ruled out in the wider area (due to location entirely within an amber zone & nearby pond habitats noted), as described the habitats noted within the application site that would be subject to the proposal (building and hardstanding in context of existing farmyard) are not considered to be notable or potentially good quality for the species. As described, the ponds/adjacent land would be retained, with managed/disturbed land situated between the proposed development buildings and the ponds. In addition, given that the proposal relates to the development of what is already a developed location as described, it is concluded that the risk to the species is at a low level.

From the condition of the site at the time of the survey as described, it is considered that presence / absence surveys of the nearest offsite ponds or District Level Licencing would not represent an appropriate nor proportionate response to the low level of risk, and identification of presence/absence would not further inform the findings and conclusions of this report given the condition of the site and land uses of development areas as described as described. However, in order to reduce risk to the species to a negligible level, it is considered that the construction phase should be appropriately managed. Consequently, in order to manage the at most low risk to GCN, and

control the construction phases, it is concluded that a Non-Licensed Method Statement should be prepared and be fully adhered to during the development phase. The methods therein would be proportionate and appropriate in the context of existing land use. Such a document should be requested by way of an appropriately worded condition upon consent, and should be a specific pre-commencement requirement.

4.3.6 Hazel Dormouse

Hazel dormouse is strictly protected under the European Habitat Regulations and the Wildlife and Countryside Act 1981.

No potentially suitable habitats would be lost/impacted as a result of the proposal. The site neither contains, nor has connectivity to suitable habitat nor locations where the species has been previously recorded.

Impact Assessment

It is not considered reasonably likely that the proposal of such small scale would result in adverse impact upon the species. No further surveys are considered necessary or appropriate and the proposal would not have any impact upon the species.

4.3.7 Invertebrates/Plant life

Given the existing, most recent and surrounding land uses and, the site is not considered to provide habitat for protected, priority or notable species. No further surveys are considered to be necessary or appropriate.

However, installation of new landscape planting within the future proposal would provide invertebrate habitat on the site post-development. Night scented plant species such as evening primrose, honeysuckle and jasmine would also attract moths in the evening, which would in turn attract foraging bats.

Recommended general enhancements are identified in section 5.2.

4.3.8 Other Species

The site is not situated in a location, nor provides potentially suitable habitat where other protected species such as, water vole and otter would be considered at risk. No further surveys/precautions are considered necessary or appropriate.

4.3.9 General Wildlife & Biodiversity

It is acknowledged that the wider site and development area may be utilised by a range of transitory wildlife species including fox, hedgehog etc.

Impact Assessment

As part of appropriate due diligence, it is advised that the full range of recommendations identified in section 5.2 be fully implemented, and all reasonable enhancements incorporated into a development proposal such that biodiversity is maximised as part of the development.

In addition, to enable wildlife to continue using the development area post development, it is advised that boundaries remain relatively open as per the current situation such that wildlife can continue to radiate in the area. This includes the use of permeable boundaries such as tree lines and hedgerows, in addition to leaving hedgehog gaps in any new fencing proposals.

5. Conclusion & Recommendations

5.1 Conclusion

In summary, the proposed development area comprises existing buildings and associated hard standing situated in the context of a farmyard. As such, the site is subject to disturbance as would be reasonably expected in such a land use context.

The statutory designation search undertaken as part of the desk study identified that the site is not situated directly within nor bounding any statutory or non-statutory designated locations.

No trees or buildings with roosting potential are situated on site, nor would be lost to the proposal. At most, buildings on site are considered to offer a negligible level of roosting potential. Further surveys are neither necessary nor appropriate.

Although no evidence of bats was found, it is probable that bats from nearby roosts will forage in the gardens of the site, in those of adjacent properties given boundary tree lines and presence of offsite ponds. Three species have been recorded roosting in St Andrew's church, with two further species found hibernating. The church is located around 150m to the west of the survey site. Given that all trees/tree lines would be retained, and where appropriate enhanced as part of a proposal, this foraging behaviour would be expected to continue after the completion of the building work and therefore it is considered that the proposal for this site will not have a detrimental effect on the local bat population, or on protected species. However, as specific recommendations, to manage potential impacts of the construction and completed phases, use of a bat considerate lighting scheme is recommended, along with the use of integral bat boxes. The full scope of ecological enhancements recommended are provided in section 5.2.

It is not considered reasonably likely that reptile species would be adversely affected by the development proposals given nature of the proposal relating to existing buildings. Whilst no further surveys are necessary and risk to the species is considered low, a precautionary Non-Licensed Method Statement is advised in respect of great crested newt. Such a document should be requested by way of an appropriately worded condition upon consent, and should be a specific pre-commencement requirement.

No active or inactive badger setts were found, with no evidence of badger activity identified. No surveys have been advised. However, general appropriate precautionary measures for the construction phases have been advised in section 5.2.

Appropriate recommendations in respect of due diligence relating to nesting birds and priority species and other ecological enhancements have been made in section 5.2 of the report.

It is considered and concluded that the proposal can proceed without adverse impacts upon legally protected/priority species and habitats provided the specific mitigatory guidance and enhancement recommendations identified within section

5.2 are fully adhered to. Where necessary, appropriately worded conditions should be placed upon any consent granted in order to ensure appropriate measures are followed.

5.2 Recommendations and Further Action

Following the survey, the following recommendations have been made to ensure obligations in respect of protected species are met/the site is enhanced for the benefit of biodiversity if developed. The recommendations are considered to be appropriate and in context with the size of the proposals, and based upon the findings of the impact assessment section of the report (4.3.1 – 4.3.9).

Construction Phase & General Precautions

- A Non-Licensed Method Statement should be prepared and be fully adhered to during the development phase. The methods would be proportionate and appropriate in the context of existing land use. Such a document should be requested by way of an appropriately worded condition, and should be a pre-commencement requirement. This document shall also include appropriate recommendations/precautions in respect of reptile species.
- To protect any radiating mammals, it is recommended that any trenches be covered over with wooden sheeting at night and fencing off the demolition/construction zone and associated compounds would be advisable during the demolition/construction phase.

Barn Owl

- With specific regards to barn owl, a priority and at-risk species, from a general perspective, it is advised that the use of the building by the species is maintained as part of the development. The strategy should establish permanence by creating a permanent accessible potential roost site space within (i.e. inside) the finished development to replace, and with the ultimate aim of enhancing what has been altered. Ideally, this should comprise erection of a barn owl in the wider site, in addition to an integral feature within the building.

Bats & Lighting

- In order to minimise risk of disturbance to potential features that may provide bat commuting and foraging habitat during the construction phase and as part of the completed development, a low impact lighting scheme is advised:
 - a) Brightness of lights should be as low as possible, and in accordance with British Standard Institute (BSI) and Bat Conservation Trust (BCT) guidance. Where possible, low pressure sodium lights are advised.
 - b) Lighting should not be directed at features that may be utilised by bats such as woodland, tree lines, hedgerows and water bodies/water courses.

- c) Directional lighting and/or fittings with hoods and cowls should be utilised.
- d) Where possible, security lighting should be motion sensitive and timers to minimise the amount of time that lights are on.
- e) Where possible, directional low impact solar bollard lighting should be used to illuminate roads, paths and parking areas.

Nesting Birds-General

- As general guidance, the bird breeding season is from March to September. If works to buildings/vegetation are proposed during the season, a check should be made for nests prior to works commencing. If nests are present, they should be left intact and undisturbed until the young have fledged.

Enhancements

- The following ecological enhancements are recommended:
 - 1 integral bird box per new dwelling;
 - 1 integral bat box per new dwelling;
 - Barn owl provision;
 - 1x woodcrete terrace swallow box per dwelling;
 - 5 externally (tree or fence mounted) bird boxes;
 - Use of wildlife friendly lighting scheme;
 - Installation of 1 x invertebrate box per dwelling,
 - Inclusion of native/wildlife friendly planting in landscape scheme; and
 - Enhancements to be secured in BMP by way of planning condition.
- To enable wildlife to continue using the development area post development, it is advised that boundaries remain relatively open such that wildlife can continue to radiate in the area. This includes the use of permeable boundaries such as tree lines and hedgerows, in addition to leaving hedgehog gaps in any new fencing proposals.

1. Annex 1 – Legislation & Planning Policy

1.1. Habitat Regulations

The Conservation of Habitats and Species Regulations transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

1.2. Wildlife & Countryside Act

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CROW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, (which includes Cirl Bunting) or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Sites of Special Scientific Interest (SSSI) are designated under this Act.

Special Protection Areas (SPA) are strictly protected sites, designated under the Birds Directive, for rare and vulnerable birds and for regularly occurring migratory species.

1.3. Natural Environment & Rural Communities Act

The NERC 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

1.4. National Planning Policy Framework (NPPF)

The NPPF February 2021 (Paragraphs 174-182) are specific in respect of conservation and biodiversity. ODPM 06/2005 remains in place. NPPF places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications, with a focus upon sustainable development and biodiversity net-gain.

1.5. Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) (Anon, 1995) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A list of

national priority species and habitats has been produced with all listed species/habitats having specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels.

1.6. Local Development Plans

County, District and Local Councils have Development Plans and other policy documents that include targets and policies which aim to maintain and enhance biodiversity. These are used by Planning Authorities to inform planning decisions.

1.7. Natural England Standing Advice

Natural England has adopted national standing advice for protected species. It provides a consistent level of basic advice which can be applied to any planning application that could affect protected species. It replaces some of the individual comments that Natural England has provided in the past to local authorities.

1.8. Bats

All species of bat found in the UK are protected by law and are designated as a protected species. Paragraph 98 of Circular 06/2005 states that *'the presence of a protected species is a **material consideration** when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.'*

Bats are protected under UK legislation under The Wildlife and Countryside Act 1981 through inclusion on Schedule 5 -Protected bat species in Britain. On a European basis, bats are subject to protection under the Conservation (Natural Habitats &c.) Regulations.

The November 2017 the Conservation (Natural Habitats &c.) Regulations make it an offence to:

- Intentionally or deliberately kill, injure or capture (take) bats.
- Intentionally or recklessly damage or destroy bat roosts or disturb bats.

A bat roost is defined as 'any structure or place which is used for shelter or protection', whether or not the bats are utilising the roost at the time. European protected animal species and their breeding sites or resting places are protected by the Habitat Regulations.

In this regard, it is an offence for anyone to deliberately capture, injure or kill any such animal or to deliberately take or destroy their young/eggs as applicable. It is also an offence to damage or destroy a breeding or resting place of a European Protected Species and it is an offence to possess a European Protected Species.

The threshold above which a person will commit the offence of deliberately disturbing a wild animal of a European protected species has been raised. A person will commit

an offence only if he deliberately disturbs such animals in a way as to be likely to significantly affect:

- The ability of any significant groups of animals of that species to survive, breed, or rear or nurture their young, or;
- The local distribution of abundance of that species.

The existing offences such as obstruction of a bat roost, low-level disturbance, and sale which cover European Protected Species under the Wildlife and Countryside Act (1981) continue to apply.

2. Annex 2 – Photographs



Buildings 6, 8 & 9 viewed from south



Buildings 1 & 2 south eastern elevation



The interior had no features that might be occupied by bats



Workshop located on north eastern side



Photo 5 north western elevation



Building 3 south eastern elevation



Building 3 interior had no features that might be occupied by bats



The roof had no features that might be occupied by bats



Building 4



Building 5 south western elevation



The interior of building 5 had no features that might be occupied by bats



Building 6



North west elevation of building 7



Building 7 interior



Building 8 north western section



Interior of building 8 storage area



Interior of barn section of building 8



Barn owl pellets in building 8



Building 9 south western section



Open interior of building 9



Building 10



Hard standing yard section of site looking south



Yard looking east



Hedge on northern boundary of site



View across yard looking north west



Pond 1 located to south east of main farmyard



Pond 1 located to south east of main farmyard



Lawn area located to west of main yard

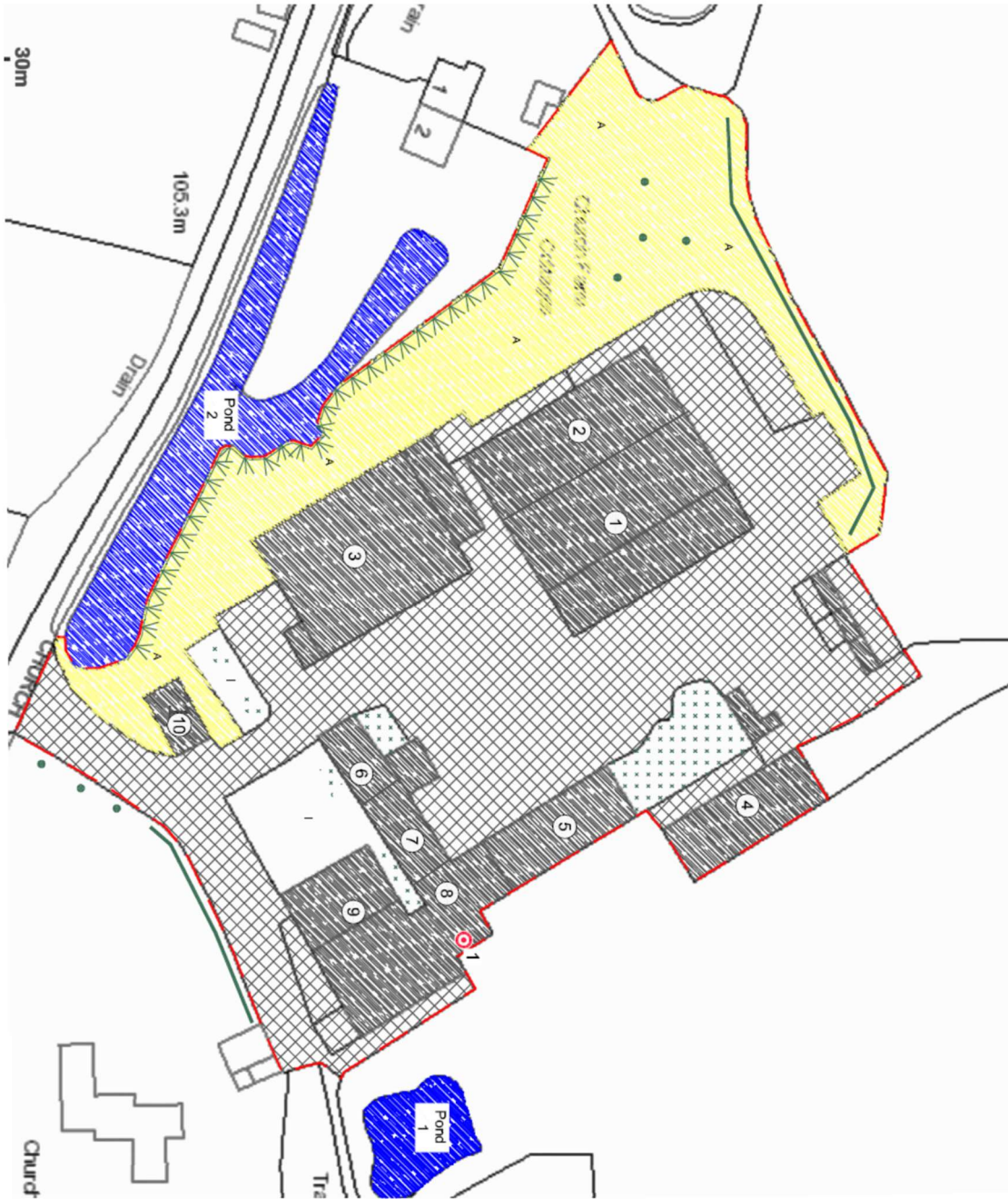


Mown lawn area located to west of main yard



Pond 2 located west of site

3. Annex 3 – Habitat Plan



- KEY**
- Survey boundary
 - Scattered scrub
 - Broad-leaved tree
 - Improved grassland
 - Standing water
 - Amenity grassland
 - Species poor mixed hedge
 - Treeline
 - Concrete / gravel hardstanding
 - Stacks / rail carriages
 - Target note
 - Barn owl pellets

Extended Phase 1 Habitat Survey

site	Church Farm, Hempstead
client	MH1367-01
contract	NTS @A4
date	Nov 2021

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4. Annex 4 – Recommended Enhancements

The following hedgerows/shrub and smaller tree species could be utilised accordingly:

- Hawthorn *Crataegus monogyna*
- Ash *Fraxinus excelsior*
- English Elm *Ulmus procera*
- Field Maple *Acer campestre*
- Hazel *Corylus avellana*
- Dog Rose *Rosa canina*
- Elderberry *Sambucus nigra*
- Holly *Illex aquifolium*
- Blackthorn *Prunus spinosa*
- Rowan *Sorbus aucuparia*
- Guelder Rose *Viburnum opulus*
- Silver Birch *Betula pendula*
- Alder *Alnus glutinosa*
- Cotoneaster spp.
- Spindle *Euonymus europaeus*

The following species could also be considered within the landscaping scheme as appropriate, given their wildlife friendly/native characteristics:

- *Viburnum* sp.
- Californian Lilac *Ceanothus* sp.
- Lavander *Lavandula angustifolia*
- Hebe Sp.
- Privet *Ligustrum vulgare*
- Dogwood *Cornus sanguinea*

In addition, vertical areas on sides of buildings and/or boundary fences could be utilised to provide additional habitat. Suitable species to grow on vertical habitats could include:

- Ivy *Hedera helix*
- Clematis *vitalba*
- Honeysuckle *Lonicera periclymenum*

Bulbs and small, wildlife friendly annuals and biennials can also be utilised within wildlife friendly and garden planting where considered appropriate by the landscape architect. Suitable species could include:

- *Hypericum perforatum*

- Wood Anemone *nemorosa*
- Tustan *Hypericum androsaemum*
- Foxglove *Digitalis grandiflora*
- Bluebell *Hyacinthoides non-scripta*

Dependant on soil condition, British Seed House RE1 mix (or similar product) is recommended for installation of the species rich grass areas where required. Alternatively, turf already seeded with wild flower seed could be utilised.

Recommend species are likely to include:

- Slender Creeping Red Fescue *Festuca rubra ssp litoralis*
- Crested Dogs Tail *Cynosurus cristatus*
- Common Bent *Agrostis capillaris*
- Cocksfoot *Dactylis glomerata*
- Meadow Fescue *Festuca pratensis*
- Golden Oat Grass *Trisetum Flavascence*
- Sweet Vernal Grass *Anthoxanthum odoratum*
- Ribwort Plantain *Plantago lanceolata*
- Yarrow *Achillea millefolium*
- Common Knapweed *Centaurea nigra*
- Meadow Sweet *Filipendula ulmaria*
- Lady's Bedstraw *Galium verum*
- Ox eye daisy *Leucanthemum vulgare*
- Self Heal *Prunella vulgaris*
- Meadow Buttercup *Ranunculus acris*
- Bulbous Buttercup *Ranunculus bulbosus*
- Agrimony *Agrimonia eupatorium*
- Rough Hawkbit *Leontodon hispidus*
- Yellow Rattle *Rhinanthus minor*
- Common Birdsfoot Trefoil *Lotus corniculatus*
- Salad Burnett *Sanguisorba minor*
- Harebell *Campanula rotundifolia*
- Cowslip *Primula deorum*
- Field Poppy *Papaver Rhoeads*
- Wild Thyme *Thymus Serpyllum*
- Quaking Grass *Brizia Media*
- Pignut *Conopodium majus*

Using Seeds

Seed Bed Preparation

Whilst seeds can be sown at any time, the best time to prepare the meadow bed is summer. The top grass, and top inch of top soil should be removed if possible. The most important factor is to ensure that the seed bed is weed free, and level using roller/rake. Also, remove stones in areas of seedbed, Wildflower meadows from seed are most successful when soil fertility is low and weeds can be less vigorous.

Sowing Seed

The best time to sow the seeds is in spring or early autumn. Spread seeds in a sand mix using a spreader for even distribution at a density of approx. 4 grams per sq. metre.

Using Plugs

Use of wildflower plugs is generally more reliable, and gives quicker results than using seed. However, over large areas, density of plugs can be reduced, with 1 or 2 plugs per square metre. Generally, plugs can be installed at any time but spring/autumn are optimum months.

Using Turf Impregnated with seeds

Use of turf less dependent on soil conditions as the seed are already in place. This enables more variety of species. However, to be successful, it should be installed in free draining areas that do not become water logged.

Wildflower Plugs and seeds are available from a number of online suppliers:

www.wigglywigglers.co.uk

www.bostonseeds.co.uk

www.wildflowershop.co.uk

www.reallywildflowers.co.uk

www.wildflower.org.uk

www.meadowmania.co.uk

Sections of turf already seeded are also available from the following suppliers:

www.meadowmat.co.uk

www.wildflowerturf.co.uk

www.wigglywigglers.co.uk

Habitat Boxes.

The use of bird and bat boxes has been recommend. Suitable products include:



Standard Bird Box-Suitable for a wide variety of species.
Can be installed in trees and buildings.



Schwegler 2F Bat box. Suitable for attachment to trees.



Woodstone Terrace nesting box

Buildings-Integral Bat Boxes

The construction of new buildings presents the opportunity for integral bat boxes, installed during the construction phase.

Products such as the Ibstock Range (www.ibstock.com) would be appropriate for installation in the eaves of the new dwellings, as installed as illustrated below:



Ibstock Integral Bat Box

Aftercare

Bats are a protected species, and any object they utilise for roosting is therefore also protected. Therefore, following installation the bat boxes should not be disturbed, as disturbance may result in an offence under the Wildlife and Countryside Act (1981) and the European Habitat Regulations (2010). Bat boxes are very robust and will not require maintenance, and therefore are at their most effective if left undisturbed.

Buildings-Integral Bird Boxes

Integral bird boxes could be installed on the north/east facing eaves. A system such as the Bird Brick House (www.birdbrickhouses.co.uk) as illustrated below is recommended, installed in accordance with the manufacturers specific recommendations.



Bird Brick House System

Installation

The following should be taken into account in consideration during the installation of bird boxes suitable for a wide variety of common garden species.

- These should be placed away from cats, and at least 2m from ground level.
- These should where possible be located away from direct sunlight, ideally facing between north and east (not south), away from cats, and at 2-5m height.
- They should also be out of reach of windows when placed upon buildings.